



RECYCLING CONTAMINATED LANDS IN WISCONSIN

FACT SHEET 3:

Step One of Conducting a Thorough Environmental Investigation: Phase I Environmental Assessment and a Phase II Scope of Work

This fact sheet provides:

- *procedures and technical information to conduct a "thorough environmental investigation" under s. 144.765, Wisconsin Statutes;*
- *guidelines to conduct a Phase I Environmental Assessment Report (page 4);*
- *an outline of details to prepare a Phase I Environmental Assessment Report (Attachment);*
- *guidelines to prepare a Phase II Environmental Assessment Scope of Work (page 5).*

It is intended for:

- *participants in the purchaser limited liability program;*
- *consultants and attorneys;*
- *lenders who perform a Phase I Environmental Assessment; and*
- *potential purchasers of commercial/industrial property, interested in performing Phase I/Phase II Environmental Assessments.*

Wisconsin's Land Recycling Law provides limited exemptions from liability under the state's Hazardous Substance Discharge Law (also known as the Spill Law) for eligible lenders and purchasers of contaminated property who meet certain requirements. An important step for either exemption is conducting an environmental assessment of the property. Purchasers need to conduct a "thorough environmental investigation"; lenders need to conduct a Phase I Environmental Assessment. Both activities are covered in this fact sheet.

Detailed information on these two limited liability exemptions (s. 144.765 and s. 144.76(9m), Wisconsin Statutes) is provided in other DNR fact sheets created to explain the Land Recycling Law. For a copy of these fact sheets and other information on the Land Recycling Law, please call 1-800-367-6076 for in-state long-distance calls or (608)264-6020 for out-of-state or local calls.

A "THOROUGH ENVIRONMENTAL INVESTIGATION" consists of THREE steps:

- 1) Phase I Environmental Assessment,*
- 2) Phase II Environmental Assessment, and*
- 3) Chapter NR 716 Site Investigation.*

CONDUCTING A THOROUGH ENVIRONMENTAL INVESTIGATION IS A SIGNIFICANT STEP TOWARD LIMITING THE LIABILITY OF PURCHASERS

WHAT IS A THOROUGH ENVIRONMENTAL INVESTIGATION AND WHY MUST I CONDUCT ONE?

The first step in the process of obtaining an exemption from liability under portions of the Hazardous Substance Discharge Law is to conduct a "thorough environmental investigation of the property". For the Land Recycling Program, the thorough environmental investigation consists of three parts, a Phase I Environmental Assessment (EA), a Phase II Environmental Assessment and a chapter NR 716 Site Investigation. Because the law requires that the purchaser receive DNR approval for the investigation and cleanup of the property, the purchaser should submit all plans and reports for each phase of the investigation for DNR review and approval, before proceeding to the next phase of work.

Phase I and Phase II Environmental Assessments are routinely performed prior to commercial/industrial property transactions. The guidance being developed by the DNR for the Land Recycling Program Phase I and Phase II Environmental Assessments is intended to provide for requirements similar to those currently requested by lenders and businesses in commercial/industrial property transaction assessments.

WHO MAY CONDUCT THE "THOROUGH ENVIRONMENTAL INVESTIGATION"?

- 1) The eligible **PURCHASER** may perform the environmental investigation, or
- 2) The person from whom the purchaser acquires the property may perform the investigation **UNDER A CONTRACT** with the purchaser.

WHAT IS A PHASE I ENVIRONMENTAL ASSESSMENT?

The Phase I Environmental Assessment is conducted to identify areas of known or potential environmental contamination. This assessment should include, but not be limited to, reviewing records, interviewing persons, and conducting physical inspections of the property in question. Sampling and analysis of media do not occur during the Phase I EA, but are planned for based on the results of the Phase I EA.

WHAT IS A PHASE II ENVIRONMENTAL ASSESSMENT?

The Phase II Environmental Assessment is conducted to physically confirm the presence or absence of environmental contamination at a site. It is not meant to determine the nature and extent of contamination. The Phase II EA should include, but is not limited to, field sampling of media, laboratory analysis of samples and visual confirmation of environmental contamination at the property.

WHAT IS AN NR 716 SITE INVESTIGATION?

This is the sampling and analysis performed to determine the degree and extent of environmental contamination found at the property and any contamination that has migrated off-site. This investigation should also provide information needed to identify and evaluate remedial options for the site. Copies of the NR 700 comprehensive cleanup rule series is available from Wisconsin's Document Sales, by calling 1-800-362-7253. The charge for the document is approximately \$10.00.

WHAT ARE THE STEPS OF A THOROUGH ENVIRONMENTAL INVESTIGATION?

STEP 1:

Perform the PHASE I ENVIRONMENTAL
ASSESSMENT
Develop a SCOPE OF WORK for a
PHASE II ENVIRONMENTAL ASSESSMENT
SUBMIT the Phase I EA Report and
Phase II EA Scope of Work to
the DNR for approval

STEP 2:

Perform the PHASE II ENVIRONMENTAL
ASSESSMENT
Develop a SCOPE OF WORK for the
NR 716 INVESTIGATION
SUBMIT the Phase II EA Report and the
NR 716 Investigation Scope of Work
to DNR for approval

STEP 3:

Perform the NR 716 INVESTIGATION
Develop the REMEDIAL OPTIONS
ASSESSMENT
SUBMIT the NR 716 Investigation Report and the
Remedial Options Assessment
to DNR for approval

PHASE I ENVIRONMENTAL ASSESSMENT

The Phase I Environmental Assessment (EA) is an essential first step in determining whether contamination exists on the property and in identifying where to direct continuing investigation efforts. It is important that the Phase I EA be completed before proceeding with additional site investigation activities. Both "purchasers" and lenders need to conduct a Phase I EA to maintain eligibility for the limited liability exemptions provided by the Land Recycling Law.

What are the goals of a Phase I Environmental Assessment?

1. Establish a minimum level of inquiry for the Phase II Environmental Assessment by evaluating the historical usage of the property.
2. Identify areas on or adjacent to the property where hazardous substance discharges occurred or potentially occurred.
3. Determine what types of investigation and sampling should be included in the Phase II Environmental Assessment to verify whether contamination exists on the property.

What types of activities are conducted during the Phase I Environmental Assessment?

1. Develop a property overview: collect basic physical information about the property, related to location, size, prominent features, and geologic, physiographic and environmental setting.
2. Establish historical information for subject property and adjacent properties: trace ownership history; identify past and present operations and processes; determine products and wastes handled at the property; locate product/waste storage and disposal areas; research regulatory history; interview relevant/knowledgeable persons; and review past environmental investigations and cleanups.
3. Perform a physical reconnaissance of the property: inspect the property to verify and supplement information obtained through the records reviews; interview people knowledgeable about the property; evaluate potential Phase II EA sampling areas.
4. Prepare the assessment report: Document all research and field information, prepare maps illustrating physical and historical information; recommend areas for Phase II EA sampling (develop a Phase II EA scope of work from this).

What should be submitted to the DNR?

When the Phase I EA is complete, a report documenting the Phase I EA information and conclusions should be prepared (Lenders: submit within 180 days of acquiring/taking control of the property). Based on the information obtained during the Phase I EA, "purchasers" should develop a scope of work for the Phase II EA and submit it with the Phase I EA report to the DNR.

Detailed Guidelines - A more detailed guide for conducting a Phase I Environmental Assessment Report is attached to this fact sheet. This guide provides, in outline format, specifics to consider when preparing a Phase I EA.

DEVELOPING THE PHASE II ENVIRONMENTAL ASSESSMENT SCOPE OF WORK

The Phase I Environmental Assessment (EA) report should identify the potential areas of environmental contamination emanating from the property or otherwise existing on the property. Based on this identification, the Scope of Work for the Phase II EA should propose sampling and analysis methods for each area to determine whether environmental contamination actually exists, based on several factors (below). A minimum level of sampling and analysis should be selected for areas of general concern on the property. These are areas which have had a history of commercial/industrial usage and thus have the potential for hazardous substance discharges, but little information is available to allow identification of specific areas of concern. This minimum level of inquiry should be based on the information obtained about the property during the Phase I EA.

Contents of a Phase II Environmental Assessment Scope of Work

The following information should be included in the Phase II EA Scope of Work:

1. Accurate and legible maps showing all areas of concern identified in the Phase I EA as well as proposed sampling locations in those areas.
2. Identification of the analytical parameters for each sampling location.
3. A description of the rationale for selecting each sampling location and the analytical parameters for each sample.
4. A description of the sampling protocol and analytical methods to be used.
5. A description of the quality assurance/quality control measures to be taken.

Factors to Consider When Selecting Phase II EA Sampling Locations/Parameters

- Chemical/physical nature of substance(s) that may have been discharged (type of product/waste, volatility/solubility of chemical(s), degradation products, potential for migration/accumulation of chemical(s)).
- Physical characteristics of how release(s) may have occurred (surficial spill, underground piping or tank, drain pipe discharge, cracks in floor/paving, visible evidence of release).
- Characteristics of media being evaluated (soil types, accumulation zones, surface water body).
- Age of discharge (related to chemical/physical nature of releases and media).
- Sampling devices/techniques needed for site conditions.

- Availability of reliable field/laboratory methods for discharge verification.
- Existing data from previous site investigations.

The following are especially important for developing minimum level of inquiry in areas of general concern.

- Level of knowledge about and complexity of historical usage of the property .
- Size of property.
- Physiographic and geologic setting of property.

Answers to Common Questions Asked About Environmental Investigation of Properties in the Contaminated Land Recycling Program

Q1. Why does the "thorough" environmental investigation include Phase I and Phase II Environmental Assessments?

A1. To receive a limited liability exemption from the spill law, a purchaser must perform a thorough environmental investigation of the property. To accomplish this, it is first necessary to make a reasonable assessment of whether areas of environmental contamination exist on the property. The common practice in today's commercial/industrial property transaction market is to perform Phase I and Phase II Environmental Assessments, for just this purpose. Once areas of contamination are identified, the requirements of Chapter NR 716 should be followed to define the degree and extent of contamination in the identified areas.

Q2. How is the DNR developing guidelines for conducting these assessments?

A2. The DNR has relied on the following resources to develop guidelines for the Contaminated Lands Recycling Program:

- a. Representatives from the banking, property development and manufacturing industries were interviewed to determine what level of environmental assessment is currently being conducted for property transactions.
- b. The American Society for Testing of Materials (ASTM) standard for Phase I Environmental Assessments was reviewed and relevant features are being incorporated into the DNR guidelines.
- c. Information from other states with similar programs was obtained and reviewed for relevant requirements.

Q3. Why not just conduct the site investigation along with the Phase I and Phase II assessments and then make a submittal to the DNR?

A3. There are two good reasons for conducting the parts of the thorough environmental investigation in order. It is important to obtain DNR review of workplans prior to conducting the activities, in order to help reduce the number of field mobilizations and to shorten the total time for investigation and review. Additionally, the applicant's program eligibility may not be determined until the Phase I and Phase II Environmental Assessments are complete. Persons who have not yet purchased the property may wish to limit their investigation investment until they have resolved their "purchaser" eligibility.

Q4. Must I go off my property to sample during the Phase II Assessment?

A4. Only when it is necessary to verify that a release of a hazardous substance occurred from your property (e.g. sample the discharge point of a drainage pipe or staining emanating from fence line).

Q5. Phase I and Phase II Environmental Assessments have already been conducted for the property by someone else. Can I just use those?

A5. Section 144.765, Stats. requires that the purchaser perform the site investigation, unless the seller performs it under a contract with the purchaser. If the Phase I and Phase II were not performed in this manner, they must be updated by the purchaser or the seller under contract with the purchaser. That is the information must be verified and updated by the purchaser's or the seller's consultant.

Q6. I received a "closure" letter from the DNR for a leaking underground storage tank remediation that I had done. Isn't this investigation adequate to receive the liability exemption?

A6. You will still need to perform the Phase I and Phase II Environmental Assessments to verify that no other potential areas of contamination exist on your property. Then the DNR will need to review your existing underground storage tank investigation report to determine whether it complies with the requirements of Chapter NR 716. Phase II EA verification sampling may be required in the UST area if the original tank investigation was performed prior to the effective date of Chapter NR 716.

Q7. Are there any qualifications requirements for professionals who perform Phase I or Phase II Environmental Assessments?

A7. Currently, there are no regulations specifically referencing Phase I and Phase II EAs. The DNR has prepared a fact sheet to help you select an environmental consultant.

For Phase I EA work, you will want to consider a consultant's experience in performing environmental assessments and their knowledge/experience with the industrial processes specific to your property.

The work conducted during a Phase II EA is similar to the activities performed for a Chapter NR 716 investigation, so it would seem reasonable to expect similar qualifications for the professionals conducting either type of work. The requirements of Chapter NR 712, while not currently applicable to Phase II EA work, do apply to professionals who perform Chapter NR 716 investigations. If the data from the Phase II EA is to be referenced or used in the Chapter NR 716 site investigation, the professional qualifications requirements of Chapter NR 712 are applicable. The DNR will likely seek to extend the Chapter NR 712 requirements to Phase II EA work in future rulemaking.

Q8. My property was just a corner gas station. Will I have to spend as much money on my Phase I assessment as would someone who owns a large industrial property?

A8. You shouldn't have to. The level of effort undertaken in the Phase I EA should reflect the size and complexity of the property usage. A large property with a lengthy history of different industrial uses should require a significantly greater level of effort in the Phase I EA (and the Phase II EA) than a small property that has been used only as a gas station.

Q9. What requirements do lenders have for conducting an environmental assessment?

A9. Lenders' requirements for conducting an environmental assessment of that property they acquire through enforcement of a security interest are stated in the Section 144.76(9m)(c)2, Wis. Statutes. These requirements should be met if you follow the attached detailed outline.

Q10. I need more detailed guidance on how to conduct a Phase I EA.

A10. Attached to this fact sheet is a more detailed outline, which provides elements that you should consider including in a Phase I EA. The DNR is also developing a detailed guidance for performing a Phase II EA. You may want to consult, the American Society for Testing of Materials (ASTM, Philadelphia) ASTM E 1527- 94/ Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Additionally, other states are developing guidelines for conducting environmental assessments, including Maryland and Minnesota.

PHASE I - PROPERTY ENVIRONMENTAL ASSESSMENT

A Phase I Environmental Assessment is a report that includes record reviews, interviews and physical property inspections to identify areas of potential hazardous substance contamination that is of environmental significance. The Phase I is used to identify areas from which samples will be collected for analysis in the Phase II Environmental Assessment. A Phase II Environmental Assessment is a report that details the environmental conditions at the property. The details of environmental assessments will depend on the past usage of the property. For example, a 0.25 acre property that has been used as a gas station for 20 years will result in a far shorter and less detailed report than a 50 acre property that has been used for heavy industrial manufacturing for 100 years. Also, assessments on properties will vary on the basis of present use; for example, a vacant property with old building foundations and debris will differ from a property that is presently being used by a large manufacturing company. The level of detail will also vary dependant on site specific factors. The following is an example of details that may be included in a Phase I environmental assessment. All items of this guide are not needed in every Phase I report. The professional judgement of the person conducting the environmental assessment will determine the applicable elements. It is appropriate to use industry standards to help determine what elements are necessary.

Introduction:

The introduction explains why the environmental assessment was performed, who hired the consultant, what the scope of the assessment was.

PURPOSE

- Objectives of the property assessment
- Client (owner/operator, purchaser)

BACKGROUND

- Present owner (length of ownership)
 - a. current use
 - b. proposed land use (residential, commercial, industrial)
- History of property
 - a. ownership history (length of ownership)
 - b. operations history
 - c. past physical features (use aerial photographs Wis.DOT, USDA-NRCS (SCS), and others i.e., Natural Resource Center)

Property Overview:

The property overview should provide the reader with a visual image of the physical characteristics of the property. These characteristics include location, site size, and prominent environmental features of the surrounding area. Surrounding land use should be documented.

PROPERTY INFORMATION

- Property location - address and legal descriptions as shown on tax records

- Site features - that at a minimum describes buildings, fill areas, drainage patterns, surface cover, and adjacent property uses
- Parcel Size - in standard units of measurements square feet, acres and etc.
- Survey (or equivalent) of property boundaries - With permanent horizontal and vertical bench mark established
- Land use and Zoning within 0.5 miles of the property (or professional judgement)

GEOLOGIC AND PHYSIOGRAPHIC FEATURES

- A brief overview of the area in terms of soils, geology, and physiographic features (topography, drainage patterns, wetlands, and surface water)

POTENTIAL RECEPTORS/ ENVIRONMENTALLY SENSITIVE AREAS

- Groundwater use
- Location of existing and abandoned water supply wells in the area including potable and non-potable (including available well logs)
- Surface water distances, uses, location, and classification
- Wetlands
- Environmentally sensitive areas

Property History:

Present and past uses of the property may indicate the likelihood of discharges of hazardous substances. Documentation of process, waste generation, on-site and off-site disposal methods will help in identifying areas of concern and parameters for further investigation. Discontinued processes, old buildings, and physical changes are particularly important to document. The following factors should be investigated to the extent possible. It is expected that details will vary from property to property.

SITE SPECIFIC CONDITIONS (Past and Present):

- Products
 - a. finished
 - b. raw (including solvents, adhesives, and etc. including Material Safety Data Sheets MSDS)
 - c. by-products
- Waste inventory
 - a. hazardous waste
 - b. solid waste
- Waste disposal processes and recycling or reuse
 - a. waste streams
 - b. waste recycling - solvent stills, waste oil used for energy recovery
 - c. disposal points
 - d. mass balance - raw products to waste (hazardous and solid) to disposal
 - 1. manifested waste
 - 2. pretreatment of waste
 - 3. solid waste
- Bulk storage tanks
 - a. underground storage tanks and associated piping
 - b. above ground storage tanks and associated piping
 - c. silos
 - d. tank testing records
- Chemical and waste storage areas
 - a. storage pads
 - b. storage rooms and buildings
 - c. staging areas
 - d. transfer areas
- Disposal Sites

- a. lagoons
- b. dumps
- c. dry wells
- d. burning pits
- e. past and present waste water treatment facilities and septic systems
- f. oil water separator
- g. condensate disposal
- h. non-contact cooling water discharge point
- i. grease traps
- j. storm drains
- k. sump outlets
- l. floor drains
- m. spray fields
- n. incinerators
- o. open pipe discharges - surface water and ditches
- p. landfarming areas
- q. settling ponds

Regulatory History:

- Present activities of owner/operator
- Permits
 - a. NPDES - wastewater discharge
 - b. air
 - c. hazardous waste treatment, storage, disposal, generator
 - d. tank registration with DILHR (underground and above ground)
 - e. waste water
 - f. other permits or registrations
- Inspections
 - a. DNR files
 - b. OSHA files
 - c. EPA files
 - d. DILHR files
 - e. other governmental bodies - local health, fire, and etc.
- Hazardous Substance/Hazardous Chemical Inventory
 - a. SARA subtitle 3 - ss. 166.20 Stats. Hazardous Substances information and emergency planning.
- Regulatory compliance history
 - a. violations - Notice of Noncompliance (NON), Notice of Violation (NOV), administrative orders
 - b. consent orders

Environmental Investigations and Cleanups:

If information that has already been obtained through previous environmental investigations, it will help identify areas of concern and may verify areas where hazardous substances releases have occurred.

- Environmental cleanups
 - a. RCRA - Hazardous Waste Closure under part B facilities with interim status Hazardous Waste final closure - identification of all solid waste management units
 - b. waste water
 - c. Wisconsin Spill Law - listing of all hazardous substance discharges and documentation of cleanup
 - d. leaking Underground Storage Tank (UST)
 - e. solid waste
- Environmental assessments
 - a. property transfer
 - b. loan requirements
 - c. corporate policy

Physical Reconnaissance:

Upon completion of the record review, a physical inspection of the property should be made. The inspection should verify the existing site conditions, should entail visual inspection of all areas of potential release identified in the records review and should assess all parts of the property to identify additional areas of concern. To aid in this purpose the investigator should have maps documenting the findings of the records review prior to the site reconnaissance visit.

- Current site activities (full production, reduced production, general maintenance, abandoned)
- Visual and physical inspection
 - a. buildings interior and exterior
 - Verification of location of all areas identified as potential discharge points in site conditions section of this report.
 - b. facility grounds
 - c. areas of concern
 - 1. rail spurs or sidings
 - 2. above or below ground pump stations
 - 3. sumps
 - 4. pits
 - 5. rail or truck loading/unloading docks or areas
 - 6. storage pads and areas including drum and waste storage
 - 7. dumpsters
 - 8. chemical storage cabinets or closets
 - 9. underground storage tanks and associated piping
 - 10. above ground storage tanks and associated piping
 - 11. silos
 - 12. transformers and capacitors
 - 13. underground piping
 - 14. storm water retention ponds and fire protection water ponds
 - 15. air vents and ducts
 - 16. roof drains
 - 17. stained areas - pavement, soils, wall, and etc.
 - 18. stressed vegetation
 - 19. no vegetation
 - 20. drainage depressions
 - 21. pools of liquid
 - 22. areas of fill material
 - 23. areas where chemicals were mixed and loaded
 - 24. areas where machinery was washed and tanks were rinsed
 - 25. all disposal sites identified in site specific conditions Section
 - 26. hazardous substance release documentation - on-site/off-site
- Investigators - names, date, time
- Contacts/Interviews - to gather information from owner/operator, past and present employees, fire inspectors, local planning and zoning officials, and long-time residents of the area.
- Limiting site conditions (snow cover, wet conditions, locked buildings, thick brush, and etc.)

Property Maps:

The record review and physical reconnaissance should result in figures and maps documenting current and past conditions, on and off the property in question and adjacent properties. All maps should include the scale and a north arrow, maps of small areas such as waste storage pads should be keyed to the maps containing all buildings and structures.

- Figures and maps:
 - a. property location - shown on USGS topo map that includes; scale, north arrow, contour interval, and quadrangle name.
 - b. property survey
 - c. all buildings and structures
 - d. all utilities and underground services
 - e. all known past buildings and structures (use historical property maps ie. Sanborn Fire Maps, aerial photos)
 - f. storage areas - waste, raw product, and by-products
 - g. water supply wells - include well logs, reconstruction documentation, and abandonment documentation for the property, include well logs for wells within 0.5 miles of the property (or professional judgment)
 - h. photo documentation of areas of concern - including areas identified during the site reconnaissance. Areas of concern with visual contamination indications should be documented using photographs with locations identified on the property map for the Phase II scope of work.
 - i. adjacent and offsite activities
 - 1. past uses
 - 2. current use
 - j. aerial photographs - documenting past physical features of the property.

Mailing list

If you are interested in the new Land Recycling Program and would like to be placed on the Land Recycling mailing list to receive information updates, please fill out, detach, and mail this form to:

Cara Norland
Land Recycling - SW/3
Wisconsin DNR
101 S. Webster St.
P. O. Box 7921
Madison, WI 53707-7921

Name: _____

Company: _____

Address: _____

How Do I Get More Information?

Call 1-800-367-6076 or (608) 264-6020 for more information and to request an application for the Contaminated Land Recycling Program.

Applicants will be placed on a first-come-first-served waiting list until staff are available to oversee their case. In the meantime, hire an environmental consultant to complete your initial investigation of the entire property, called a Phase 1 environmental assessment, and submit it to the DNR.

When a DNR project manager is available, you and your consultant will be required to submit an in-depth Phase 2 investigation of the property. Based on this investigation, you will follow Wisconsin environmental investigation and cleanup laws, including the NR 700 administrative rule series, to respond to contamination on the property. (Copies of the NR 700 rule series are available from Document Sales at 1-800-362-7253.)

Emergency & Remedial Response
Contaminated Land Recycling - SW/3
Department of Natural Resources
101 S. Webster St.
Madison, WI 53707-7921